

What is claimed is:

1. A device for monitoring a medical microsample in the flow measuring cell of an analyzer with regard to position and the absence of bubbles by means of an alternating voltage applied to the measuring cell, said measuring cell being provided with a multitude of electrode systems, which are placed one behind the other and comprise a number of single electrodes each, for measuring a substance contained in the microsample by means of a measurement voltage which is essentially a DC voltage, wherein both the alternating voltage and the measurement voltage are simultaneously and directly applied to the single electrodes of the respective electrode system, and wherein the measured AC component or the measured impedance provides a measure for the position of the microsample and the absence of bubbles.
2. A device according to claim 1, wherein an electrode system includes a working electrode and a reference electrode, both electrodes serving as electrical contacts for measuring the impedance between working electrode and reference electrode.
3. A device according to claim 1, wherein an electrode system includes a working electrode, a counter-electrode and a reference electrode, the working electrode and the counter-electrode serving as electrical contacts for measuring the impedance between working electrode and counter-electrode.
4. A device according to claim 3, wherein in systems for continuous measurement the electrodes are arranged in the sequence working electrode, reference electrode, and counter-electrode in flow direction of the microsample.
5. A device according to claim 3, wherein counter-electrodes are placed both in front of and behind the working electrode in flow direction of the microsample, both counter-electrodes being electrically short-circuited.

6. A device according to claim 3, wherein the counter-electrode and the working electrode are positioned opposite each other in the measuring cell.
7. A device according to claim 1, wherein a circuit is provided for producing the voltages to be applied to the single electrodes, which circuit has a summation point at which the alternating voltage for the purpose of monitoring the medical microsample with regard to position and absence of bubbles is superposed on the DC voltage serving as measurement voltage.
8. A device according to claim 7, wherein the summation point is connected with the inverting input terminal of an operational amplifier.
9. A device according to claim 1, wherein each electrode system is provided with a device for measuring impedance, which is configured as a circuit for superposing an alternating voltage on a DC voltage.
10. A method for monitoring a medical microsample with regard to position and absence of bubbles, which is introduced into the flow measuring cell of an analyzer and passes a multitude of electrode systems, each comprising a number of single electrodes for measuring a substance contained in the microsample by means of a measurement voltage which is essentially a DC voltage, wherein an alternating voltage is coupled in via two single electrodes of at least one electrode system, and wherein the AC component or impedance measured is used as a measure for the sample position and absence of bubbles of the microsample in the area of the at least one electrode system.
11. A method according to claim 10, wherein measurement voltage and alternating voltage are coupled in simultaneously.

12. A method according to claim 1, wherein the microsample in the flow measuring cell is moved along until a predetermined value for impedance or conductance is obtained, which indicates that the microsample is positioned precisely in the area of the respective electrode system.
13. A method according to claim 1, wherein the sample position and absence of bubbles of the microsample are determined in the area of each electrode system.

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